

**WHAT IS CLAIMED IS:**

1. A multi-optical receptacle assembly comprising at least two optical receptacles for at least two respective transceivers, said at least two optical receptacles having a shared wall between adjacent optical receptacles of said at least two optical receptacles.
2. The multi-optical receptacle assembly of claim 1, wherein said multi-optical receptacle assembly comprises two optical receptacles.
3. The multi-optical receptacle assembly of claim 1, wherein said multi-optical receptacle assembly comprises four optical receptacles.
4. The multi-optical receptacle assembly of claim 1, wherein said multi-optical receptacle assembly comprises more than four optical receptacles.
5. The multi-optical receptacle assembly of claim 1, wherein said shared wall has a thickness of 0.001 inch to 0.15 inch.
6. The multi-optical receptacle assembly of claim 5, wherein said shared wall comprises a unitary shared wall.
7. The multi-optical receptacle assembly of claim 1, wherein said shared wall comprises a unitary shared wall.
8. A multi-transceiver assembly comprising at least two transceivers having a shared wall between adjacent transceivers of said at least two transceivers.
9. The multi-transceiver assembly of claim 8, wherein said multi-transceiver assembly comprises two transceivers.

10. The multi-transceiver assembly of claim 8, wherein said multi-transceiver assembly comprises four transceivers.

11. The multi-transceiver assembly of claim 8, wherein said multi-transceiver assembly comprises more than four transceivers.

12. The multi-transceiver assembly of claim 8, wherein said shared wall has a thickness of 0.001 inch to 0.1 inch.

13. A multi-transceiver cage comprising:

a hollow cage body for mounting at least two transceivers within said multi-transceiver cage and for preventing electromagnetic radiation from outside said cage body from entering said cage body and for preventing electromagnetic radiation from said transceiver from exiting said cage body;

a plurality of mounting pins extending from said cage body for mounting said transceiver on a printed wiring board; and

a plurality of internal contact fingers at a proximal open end of said hollow cage body for engaging a chassis panel through which said transceiver cage is inserted and for engaging said at least two transceivers.

14. The multi-transceiver cage of claim 13, wherein said at least two transceivers comprise two transceivers.

15. The multi-transceiver cage of claim 13, wherein said at least two transceivers comprise four transceivers.

16. The multi-transceiver cage of claim 13, wherein said at least two transceivers comprise more than four transceivers.

17. The multi-transceiver cage of claim 13, wherein said mounting pins extend from a wall of said cage body.

18. The multi-transceiver cage of claim 13, wherein said plurality of internal contact fingers are designed for engaging a plurality of transceiver contact fingers on said at least two transceivers and an opening in said chassis panel.

19. The multi-transceiver cage of claim 13, further comprising openings having a longest dimension no greater than  $\frac{1}{4}$  of the wavelength of the electromagnetic radiation corresponding to ten times the highest signal frequency present in transceiver circuitry connected to said transceiver cage.

20. The multi-transceiver cage of claim 13, wherein said transceiver cage further comprises mounting openings for engaging mounting tabs on said at least two transceivers mounted in said transceiver cage for holding said at least two transceivers in place in said transceiver cage.

21. An optoelectronic device comprising:

at least two transceivers; and

a transceiver cage comprising:

a hollow cage body for mounting said least two transceivers within said multi-transceiver cage and for preventing radiation from outside said cage body from entering said cage body and for preventing radiation from said transceiver from exiting said cage body;

a plurality of mounting pins extending from said cage body for mounting said transceiver on a printed wiring board; and

a plurality of internal contact fingers at a proximal open end of said hollow cage body for engaging a chassis panel through which said transceiver cage is inserted and for engaging said at least two transceivers.

22. The optoelectronic device of claim 21, wherein said at least two transceivers comprise two transceivers.

23. The optoelectronic device of claim 21, wherein said at least two transceivers comprise four transceivers.

24. The optoelectronic device of claim 21, wherein said at least two transceivers comprise more than four transceivers.

25. The optoelectronic device of claim 21, wherein said mounting pins extend from a side wall of said cage body.

26. The optoelectronic device of claim 21, wherein said plurality of internal contact fingers are designed for engaging a plurality of transceiver contact fingers on said at least two transceivers.

27. The optoelectronic device of claim 21, wherein said cage body further comprises openings having a longest dimension no greater than  $\frac{1}{4}$  of the wavelength of the electromagnetic radiation corresponding to ten times the highest signal frequency present in transceiver circuitry connected to said transceiver cage.

28. The optoelectronic device of claim 21, wherein said cage body further comprises mounting openings for engaging mounting tabs on said at least two transceivers mounted in said transceiver cage for holding said at least two transceivers in place in said transceiver cage.

29. A multi-optical receptacle assembly comprising:  
at least two optical receptacles for at least two transceivers;  
a connecting means that connect together said at least two optical receptacles;  
and

a mounting means for mounting said multiple-optical receptacle assembly in a housing.

30. The multi-optical receptacle assembly of claim 29, wherein said at least two optical receptacles comprise two optical receptacles.

31. The multi-optical receptacle assembly of claim 29, wherein said at least two optical receptacles comprise four optical receptacles.

32. The multi-optical receptacle assembly of claim 29, wherein said at least two optical receptacles comprise more than four optical receptacles.

33. The multi-optical receptacle assembly of claim 29, wherein said multi-optical receptacle assembly has a unibody construction.

34. A multi-transceiver housing comprising:

an opening at a proximal end thereof for receiving at least two optical receptacles for at least two respective transceivers; and

means for mounting said at least two optical receptacles in said multi-transceiver housing.

35. The multi-transceiver housing of claim 34, wherein said at least two optical receptacles comprise two optical receptacles.

36. The multi-transceiver housing of claim 34, wherein said at least two optical receptacles comprise four optical receptacles.

37. The multi-transceiver housing of claim 34, wherein said at least two optical receptacles comprise more than four optical receptacles.

38. The multi-transceiver housing of claim 34, wherein said at least two optical receptacles are part of a multi-optical receptacle assembly comprising:

said at least two optical receptacles;

a connecting means that connect together said at least two optical receptacles;

and

a optical receptacle mounting means for mounting said multiple-optical receptacle assembly in said transceiver housing.

39. The multi-transceiver housing of claim 38, wherein said multi-optical receptacle assembly has a unibody construction.

40. The multi-transceiver housing of claim 34, wherein said multi-transceiver housing comprises a unibody construction.

41. The multi-transceiver housing of claim 34, wherein said housing body is comprised of metal.

42. The multi-transceiver housing of claim 34, wherein said housing body is comprised of a plastic coated with a conductive material.

43. The multi-transceiver housing of claim 34, wherein said housing body is comprised of a plastic filled with a conductive material.

44. The multi-transceiver housing of claim 34, wherein said housing body is comprised of a non-conductive plastic.

45. An optoelectronic device assembly comprising:

a PWA; and

at least one optoelectronic device mounted on at least one side of said PWA, wherein said at least one optoelectronic device comprises:

at least two transceivers; and

a transceiver cage comprising:

a hollow cage body for mounting said least two transceivers within said multi-transceiver cage and for preventing radiation from outside said cage body from entering said cage body and for preventing radiation from said transceiver from exiting said cage body;

a plurality of mounting pins extending from said cage body for mounting said transceiver on a printed wiring board; and

a plurality of internal contact fingers at a proximal open end of said hollow cage body for engaging a chassis panel through which said transceiver cage is inserted and for engaging said at least two transceivers.

46. The optoelectronic device assembly of claim 45, wherein said at least one optoelectronic device comprises a plurality of optoelectronic devices.

47. The optoelectronic device assembly of claim 45, wherein said at least one optoelectronic device comprises at least 24 optoelectronic devices mounted on one side of said PWA.

48. The optoelectronic device assembly of claim 45, wherein said optoelectronic device assembly comprises at least two optoelectronic devices mounted on opposing sides of said PWA.

49. The optoelectronic device assembly of claim 45, wherein said at least two optoelectronic devices comprise 48 optoelectronic devices.

50. The optoelectronic device assembly of claim 45, wherein said at least two transceivers comprise two transceivers.

51. The optoelectronic device assembly of claim 45, wherein said at least two transceivers comprise four transceivers.

52. The optoelectronic device assembly of claim 45, wherein said at least two transceivers comprise more than four transceivers

53. The optoelectronic device assembly claim 45, wherein said mounting pins extend from a side wall of said cage body.

54. The optoelectronic device assembly of claim 53 further comprising a chassis panel through which a proximal end of said at least one optoelectronic device extends and in which said at least one optoelectronic device is mounted, said chassis panel being substantially perpendicular to said PWA and connected to said PWA.

55. The optoelectronic device assembly of claim 54, wherein said at least one optoelectronic device comprises at least two optoelectronic devices mounted on opposing sides of said PWA.

56. The optoelectronic device assembly of claim 54, wherein said mounting pins extend from a distal end of said cage body.

57. The optoelectronic device assembly of claim 54, further comprising a chassis panel through which a proximal end of said at least one optoelectronic device extends and in which said at least one optoelectronic device is mounted, said chassis panel being substantially parallel to said PWA and connected to said PWA.